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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/957,470	09/21/2001	Naoki Yoshioka	010871	2597

38834 7590 04/18/2006

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EXAMINER

BUSHEY, CHARLES S

ART UNIT PAPER NUMBER

1724

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/957,470

Applicant(s)

YOSHIOKA ET AL.

Examiner

Scott Bushey

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1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-23 and 30-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22 and 31 is/are allowed.
- 6) ☒ Claim(s) 19,30 and 32-34 is/are rejected.
- 7) ☒ Claim(s) 20,21 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. Claim 32 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 32, lines 3-4, "the other end" lacks antecedent basis. Apparently, applicant is referring to the previously recited "another end", as set forth on line 2 of claim 32.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 19, 30, 33 and 34 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Zhao et al (Fig. 4; col. 5, lines 13-67; col. 6, lines 1-6, 55-67; col. 7, lines 1-18).

Applicant should note that the orifice member is formed by the lower portion of the unnumbered element of Figure 4, which has recess (137), such member forming the gap around the end of the internal conduit (144) of the double conduit (136,144) through which the atomization gas is spouted. Applicant should note that the gas transferring

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external conduit, which carries the atomization gas to the vaporizing chamber, is formed by a combination of three elements, namely the unnumbered element connected to the bottom of element (138), portion (136), and the top portion of the unnumbered element that has recess (137). The reference vaporizer further includes a nozzle ring (142), which is provided at the tip of the atomization section in the vicinity of the end of the internal conduit (144). The nozzle ring (142) is heated and provides a vaporization surface (146), which prevents the liquid substance, which has been vaporized from re-condensing (note col. 6, lines 2-4). It should further be noted that the element (104) including the cooling channels (134) are considered to anticipate the cooling member provided around the transfer conduit and in contact with the external conduit, as newly added to claim 19. Furthermore, it is clear that the orifice member, as well as the cooling member extend around the broadly recited "end portion" of the internal conduit and transfer conduit, respectively.

With respect to the language added to independent claim 19, as well as new dependent claim 33, pertaining to the atomization gas "flowing through the space", it should be noted that the atomization gas that enters into the Zhao et al reference at (135) flows into the recess (137, which forms the lower end of the external conduit) and thereafter flows both upwardly into other portions of the external conduit and subsequently downwardly around the internal conduit (114,144), exiting the external conduit at the gap formed by the orifice member (the lower portion of the unnumbered element of Figure 4, which has recess (137). The flow of atomization gas is bounded within the external conduit at the upper end by element (138) and exits the lower end of

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the external conduit (136) through the gap formed by the internal conduit and the orifice member. Applicant should note that, the manner or direction of flow of the atomization gas within the external conduit is not restricted by the language added to instant claim 19. Ultimately all of the atomization gas that enters at (135) will enter the vaporization chamber (146) by passing through the external conduit as defined above.

With respect to instant claim 34, as noted above, the external conduit is formed by multiple elements, several of which (the unnumbered members at the top and bottom ends of the external conduit) are separate from the cooling member (104), and thus the reference meets the limitation of newly added claim 34.

***Allowable Subject Matter***

4. Claims 22 and 31 are allowed, claim 22 for the reasons of record, and claim 31 for the reasons as set forth in the Advisory Action mailed August 4, 2005.

5. Claims 20, 21, and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claim 32 would be allowable if rewritten to overcome the rejection under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

7. Applicant should note that independent claim 19 would be considered to be allowable over the prior art of record, if applicant were to insert the following language therein. On line 10 of claim 19, as amended on February 7, 2006, applicant should replace the phrase, "flowing through the space" with --flowing into a first end of the

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external conduit, through the space, and exiting a second end of the external conduit remote from the first end--. Also, in claim 19, line 11, as amended on February 7, 2006, applicant should insert, --provided nearer said second end than said first end--, after "member".

If applicant chooses to adopt the above suggested language changes to claim 19, than claim 32 should be cancelled.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 32-34 have been considered but are moot in view of the new grounds of rejection under 35 U.S.C. 112, second paragraph and 35 U.S.C. 102(e).

9. Applicant's arguments filed February 7, 2006 have been fully considered but they are not persuasive. Applicant's arguments in support of patentability of claims 19, 30, 33, and 34 have been addressed in the rejection statement above.

With respect to the definitions of "transfer" and "through", applicant apparently wishes to embellish the definitions cited to include restrictions upon directional travel. Such is not found within the definitions, and will not be read into the claims.

### ***Conclusion***

10. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Bushey whose telephone number is 571 272-1153. The examiner can normally be reached on M-Th 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

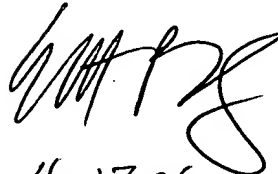
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Scott Bushey  
Primary Examiner  
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csb  
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